

FROZEN FOOD LOCKER PLANTS

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The following statement is intended to give a general picture of the frozen food locker plant situation and its relationship to the frozen food industry. It deals with the types of plants that have been built during the past ten years and only those plants that serve local requirements.

The Frozen Food Locker plants generally are in one of the following classes:

- A. Plants that are operated in connection with some other business such as a grocery store, meat market or other previously established concern. These plants are usually only used for deep freezing and storing in lockers products that patrons have prepared and processed at home; also, for the storage of previously prepared products that have been processed elsewhere.
- B. Plants that are operated only as locker plants and not concerned with any associated business. These plants have more complete facilities than those in the first class. They accept foods for processing such as home-killed meats, fruits and vegetables, processing these foods completely and deep freezing them for storage in the locker plant. Some plants of this type do meat curing and lard rendering but seldom enter into salvage or by-product recovery work; some do merchandising of previously prepared foods for the convenience of their patrons.
- C. Plants that have complete facilities beginning with cattle pens and places for holding all kinds of livestock for slaughtering as well as facilities for receiving fruits and vegetables in bulk lots for processing and storing. The complete plant will have facilities for the following major activities:
 1. Holding pens for stock and fowl
 2. Slaughtering facilities
 3. Meat cutting room
 4. Fruit and vegetable processing room
 5. Lard rendering
 6. Hide storage
 7. Offal recovery
 8. Smoking and meat curing
 9. Chilling and aging

10. Packaging space
11. Deep freeze compartment
12. Locker room
13. Bulk storage (both high and low temperature space)
14. Merchandise sales
15. Packaging material sales
16. Sales of processing ingredients
17. Educational programs to further improve processing of foods for frozen foods storage facilities.

All of the foregoing classes of plants will vary to some extent depending upon locality, products produced in the area, demands of the patrons, and even to the nationality of the surrounding population. Each of the plants will have the accessory business requirements of accounting and sales records and procedures. The number of plants in these three classes cannot be given due to the lack of up-to-date information. It would not be of particular importance here, as this outline is intended to show the over-all space being used for storage, the storage rates, patrons served, estimated investment, personnel required, and similar items which will give a general picture.

The answers to the following questions or topical headings will broadly cover the Frozen Food Locker plants and their activities:

Q. How many plants are there in the United States?

A. From a study of various sources it is estimated that at the end of 1947 there will be approximately 9,000 plants in operation.

Q. Who owns these plants?

A. It is estimated that 51% are owned by individuals. These are generally in classes A and B. Approximately 30% are owned by some form of partnership or corporation and these plants are usually formed to operate as class A and B. The remaining 19% are operated by mutual associations and co-operatives and are mostly in class C with certain amplifications suitable to the area and patronage.

Q. What is the investment of plants?

A. Plant investment is usually considered on a per-locker basis and during the past few years because of rising prices these costs have been very unstable; however, for the three mentioned classes of plants it is estimated that the investment ranges are as follows:

Class A - - - - - \$20.00 to \$30.00 per locker

Class B - - - - - \$40.00 to \$50.00 per locker

Class C - - - - - \$55.00 to \$100.00 per locker

Quite naturally the cost on a per-locker basis varies with the plant's accessory facilities. A plant without slaughtering facilities would cost less on a per-locker basis than one that had this facility. Different areas seem to make little difference in the average cost, as the parts that make up the plants are more or less comparable. Some differential will occur in investment, depending upon whether an existing building is used or a new building is required.

Q. How many lockers are there in the plants?

A. In the class A locker plant, the number of lockers is usually small because of the use of existing available space for facilities. This might be in the form of available adjacent land, a converted spare room or a room in an adjacent store building. It is estimated that 250-300 lockers would be a fair average. In the class B locker plant it is indicated that more thought has been given to lockers to be rented; therefore, quite often a new building is required or a sufficiently large building is secured that was formerly used for some other purpose. It is estimated that the average number of lockers would fall in the 360-440 group.

In the third or class C group, more lockers are required as more complete facilities are offered. New buildings are generally the rule for this class of plant, and it is estimated that the number of lockers would be in the 500-700 group.

Probably it could be assumed that an average of 400 lockers per plant could be used for the estimated 9,000 plants in operation referred to above.

Q. What is the total number of lockers in use?

A. With an estimated 9,000 plants with an average of 400 lockers per plant there would be represented 3,600,000 lockers available. From reliable sources it is estimated that these are all in use in one manner or another, if not by individual locker renters then by the operators of the plants for general and bulk storage on a month to month basis.

Lockers are of two types, drawer and door openings. The drawer type is larger as a rule than the door type. The lockers are in tiers usually for drawers and three doors in one tier. The average space is four cubic feet. For the 3,600,000 lockers there would thus be 14,400,000 cubic feet of storage space. The lockers are filled and emptied three times a year, representing 43,200,000 cubic feet of utilized space on an annual basis.

In addition to locker storage there is usually space in the plant for some form of bulk storage. With the class A and B plants, this space is of little consequence. It is estimated that with the class C plants there might be 3,200,000 cubic feet available for bulk storage. The turnover in this class is probably greater than locker turnover, as the foods placed in bulk storage are for relatively immediate use. For sake of estimation, if the products moved one a month it would give an annual space use of 38,400,000 cubic feet.

Q. What is the cost of operation?

A. This is a decidedly variable matter, depending upon labor costs, profit sharing, insurance rates, and amortization of loans or interest on the investment. On a per-locker basis in class C plants it is probably in a range of \$36.00 to \$42.00, not including plant depreciation charged to expense. In many cases revenue losses result in slaughtering but are made up in other plant operations. This loss is tolerated in order to get the slaughtering done in the plant where the spoilage can be eliminated in the chilling and curing of meats.

Q. What is the estimated revenue?

A. In class A and B plants the revenue is rather indeterminate due to side lines of other parts of the business. In the class C plants where nothing but food processing is done, the revenue can be more closely analyzed. It is estimated that the revenue per locker falls in the range of \$40.00 to \$48.00. In some cases revenues are greater than this because of the ability of the plant to cover more broadly the food processing field and take advantage of offal recoveries and by-product sales.

Q. What is the general price schedule for processing?

A. Attached is a copy of the processing price schedule suggested for the REA-financed frozen food locker plants. It is not intended that these prices must be charged, but this price list represents a cross-section of prices all over the country and must be amplified for local conditions and competition.

Q. What personnel is required?

A. In a complete plant like these in class B and class C, there is generally required one employee for each 100 lockers not including the bookkeeper and plant manager. In the class A

plants and some of the class B plants, one employee per 100 lockers is sufficient, including the bookkeeper and manager. These latter employees usually perform other functions such as wrapping and cutting meat.

To further generalize and obtain a picture of the plant's position in the general pattern of storing and marketing of foods, the following must be borne in mind:

9,000 plants

3,600,000 lockers, 14,400,000 cubic feet of storage space

3,200,000 cubic feet bulk storage space

Preservation of locally produced foods for local consumption

This gives to each area served by a plant less dependence upon transportation of foods to and from larger processing centers, quicker turnover of products, preservation of local surpluses which in many instances are too low in volume to sell to other processors, a saving in patrons' earnings, control of the products they wish to consume. It lessens the burden on processors in large population centers, increases employment in rural centers, provides a local food bank not influenced by other area production disturbances, and many other items of benefit to the locality and food producing groups as a whole.

Q. What is the future for locker plants of these types?

A. Class A and class B probably are of little importance except to a relatively small group, but class C plants are self-sustaining and broad in their ability to fully serve an area. The area they can serve is limited only by the size of the plant and feasibility of travel to it. It has been estimated that in rural and urban areas where a substantial portion of the food raised in the area is for human consumption each group of 2,000 families would support a class C locker plant of 500 locker capacity. In the middle east in rural areas where the farms may average 80 to 100 acres, this would mean a class C plant for every 25 square miles of territory, whereas the adverse effect is minimized with respect to purely local facilities and population in the immediate vicinity.

the population and about 20% of the urban areas
are covered by wetlands, considered as an
important part of the environment.

Population growth and economic development of the area have
been accompanied by significant changes in the environment, particularly

urban sprawl. In just three years 200,000 m² of wetlands were lost.
The main reason for this loss was the conversion of wetlands into
agricultural land, which has led to the deterioration of the
environmental conditions around Lake Etang. The water quality
is deteriorating due to the increased amount of organic waste
and nutrients resulting from the increased number of people in the
area. This has led to eutrophication of the lake, which is especially
dangerous for the many species of fish and other aquatic life.

The most recent study carried out at Lake Etang
estimated that the lake has lost about 20% of its surface area over the last 20 years.
This is mainly because of the conversion of wetlands into
agricultural land, which has led to the deterioration of the
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